4. At page 9, line 21, after "8013-8024).", please insert --Additionally, radiolabeled non-standard nucleotide bases can be included in an oligonucleotide.--.

5. At page 53, line 19, after "Pharmacia.", please insert --In previous experiments, the Klenow fragment of DNA polymerase I was used to enzymatically prepare oligonucleotides including non-standard bases. Additionally, in previous experiments, radiolabeled nucleoside triphosphates, including ^{3}H and ^{32}P radiolabeled standard and non-standard bases were enzymatically incorporated into a oligonucleotide.--.

IN THE CLAIMS

Please cancel claim 1 and add new claims 4-14 as follows:

4. (NEW) A method of making an oligonucleotide, the method comprising:

providing a template oligonucleotide comprising a sequence of nucleotides, the template comprising at least one non-standard nucleotide at a preselected site in the sequence;

contacting the template with a mixture of nucleotide triphosphates, the mixture comprising nucleotide triphosphates that are complementary to the nucleotides of the template, wherein the nucleotide triphosphate complementary to the non-standard nucleotide at the preselected site comprises a derivatized nucleotide; and

forming an oligonucleotide complementary to a portion of the template by enzymatic polymerization of the nucleotide triphosphates in a sequence complementary to the portion of the template.

5. (NEW) The method according to claim 4, wherein the non-standard nucleotide at the preselected site is a non-standard nucleotide selected from the group consisting of pyDAD, puADA, pyAAD, puDDA, pyDDA, puAAD, pyADD and puDAA.

6. (NEW) The method according to claim 4, wherein the non-standard nucleotide at the preselected site is iso-G or iso-C.